

the first of these is a user workstation 10, which is connected to an ISP 20. The ISP 20 is connected to the Internet 30. The Internet 30 is connected to a Web Site A 40. Web Site A 40 includes four web servers: Web Server a 41, Web Server b 42, Web Server c 43, and Web Server d 44. Web Server a 41 is connected to Web Server b 42, Web Server b 42 is connected to Web Server c 43, Web Server c 43 is connected to Web Server d 44, and Web Server d 44 is connected to Web Server a 41. Web Site A 40 is also connected to the Internet 30.

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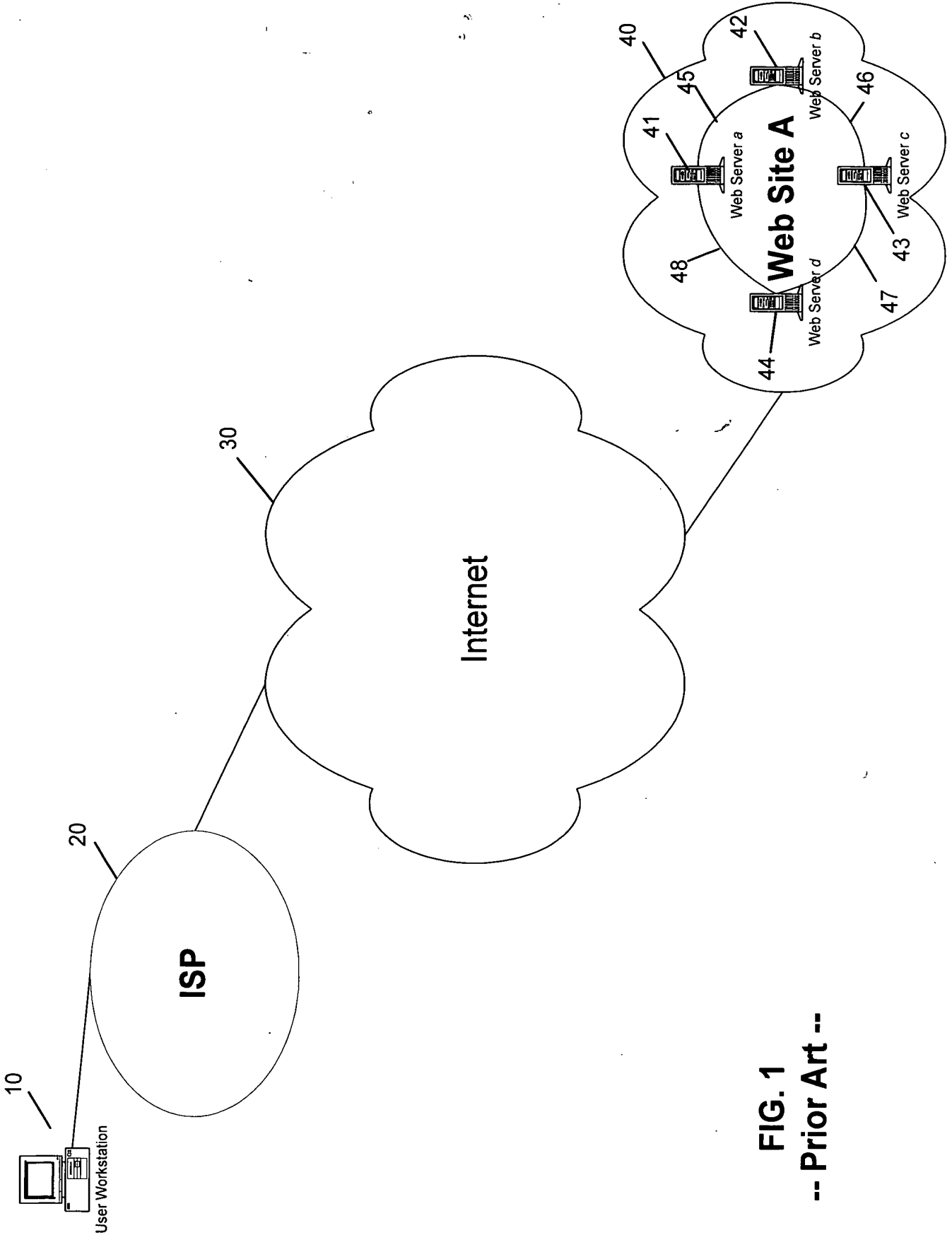


FIG. 1
-- Prior Art --

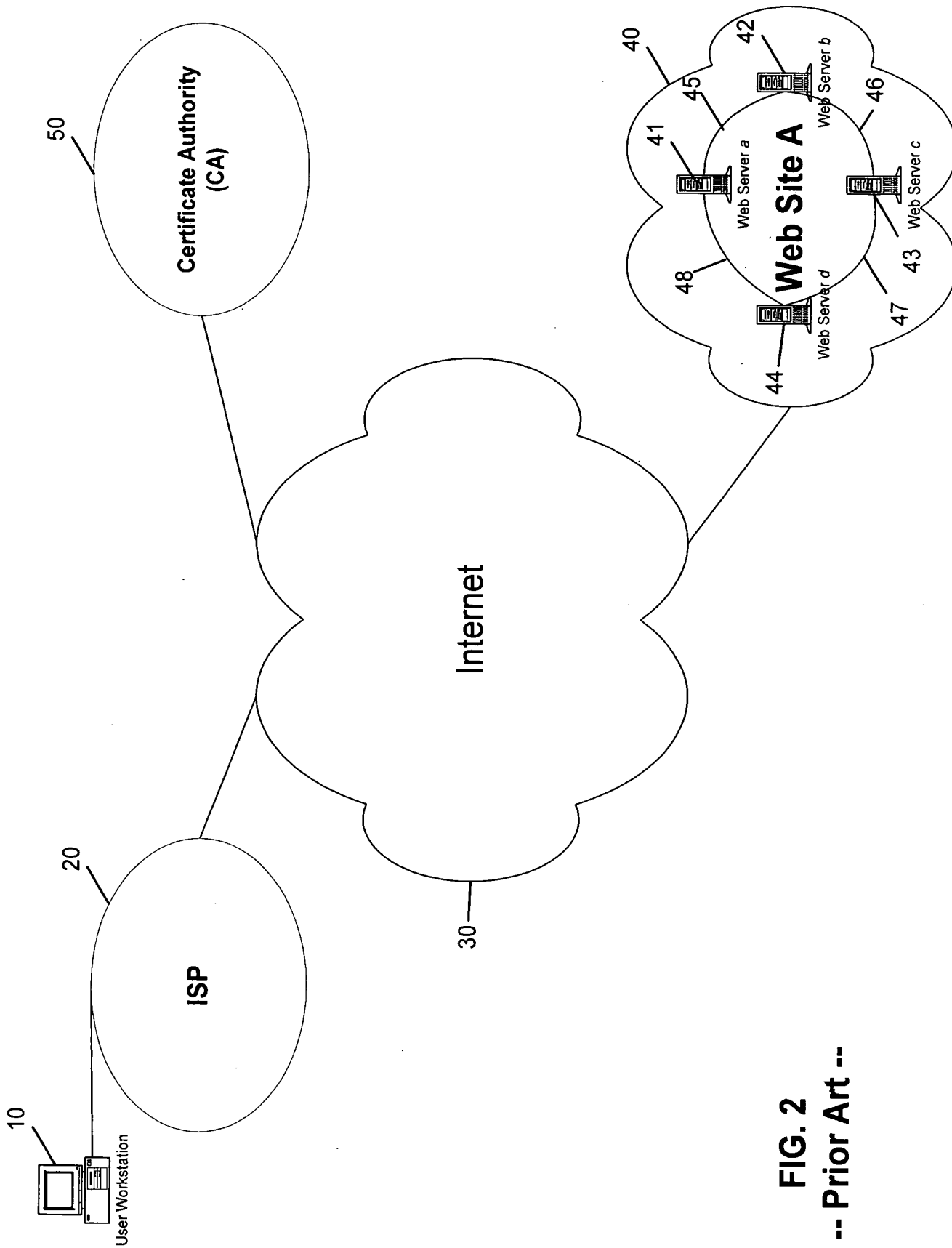


FIG. 2
-- Prior Art --

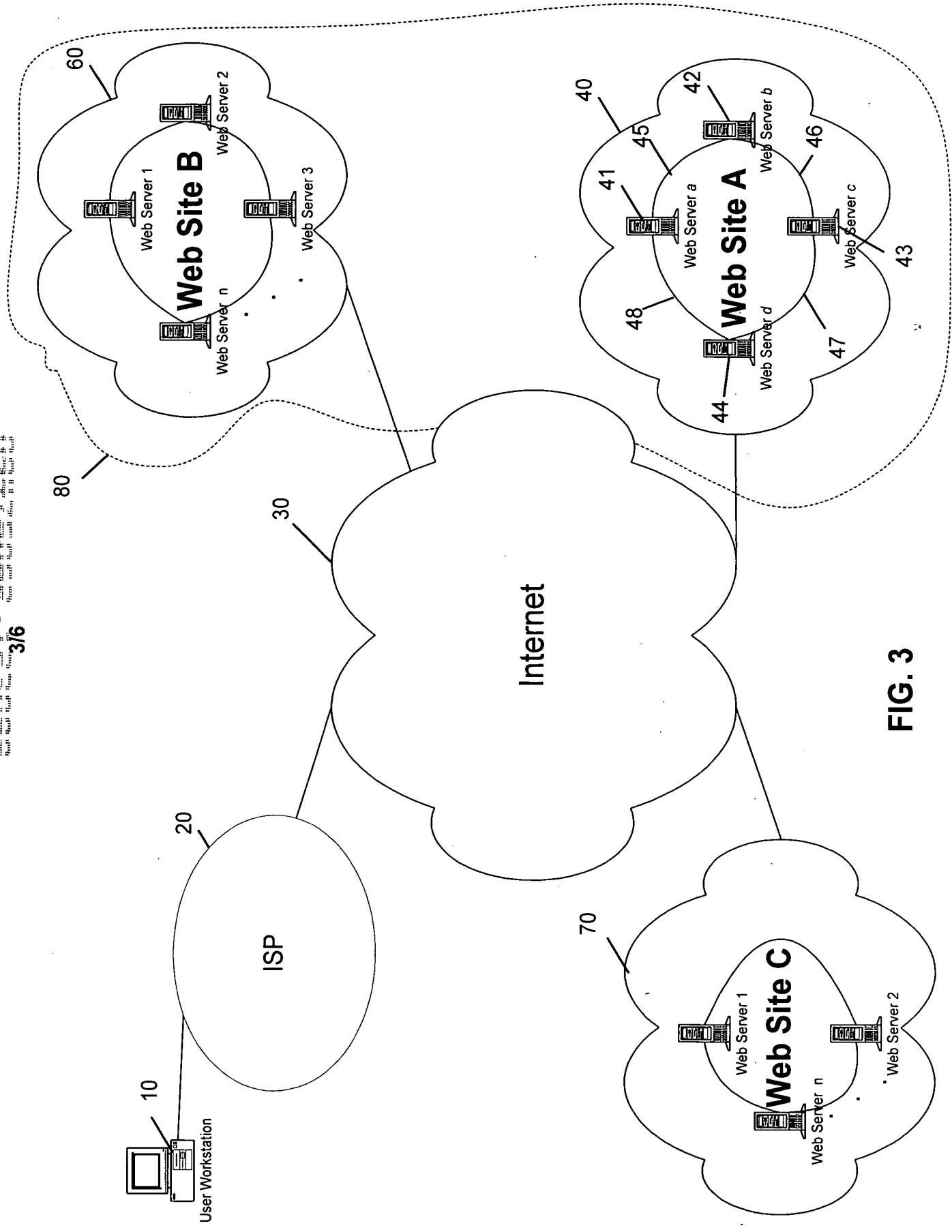


FIG. 3

FIG. 4

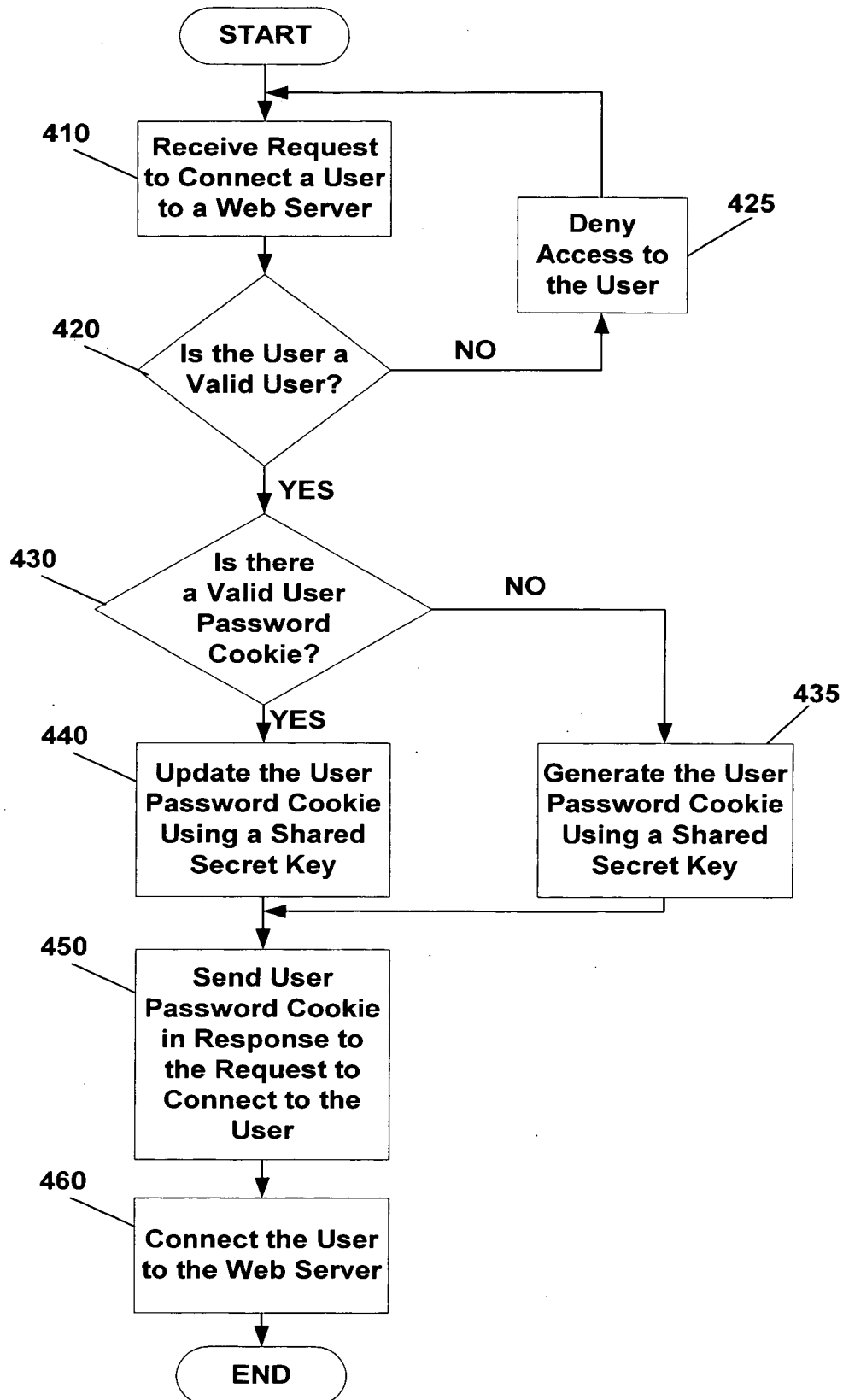
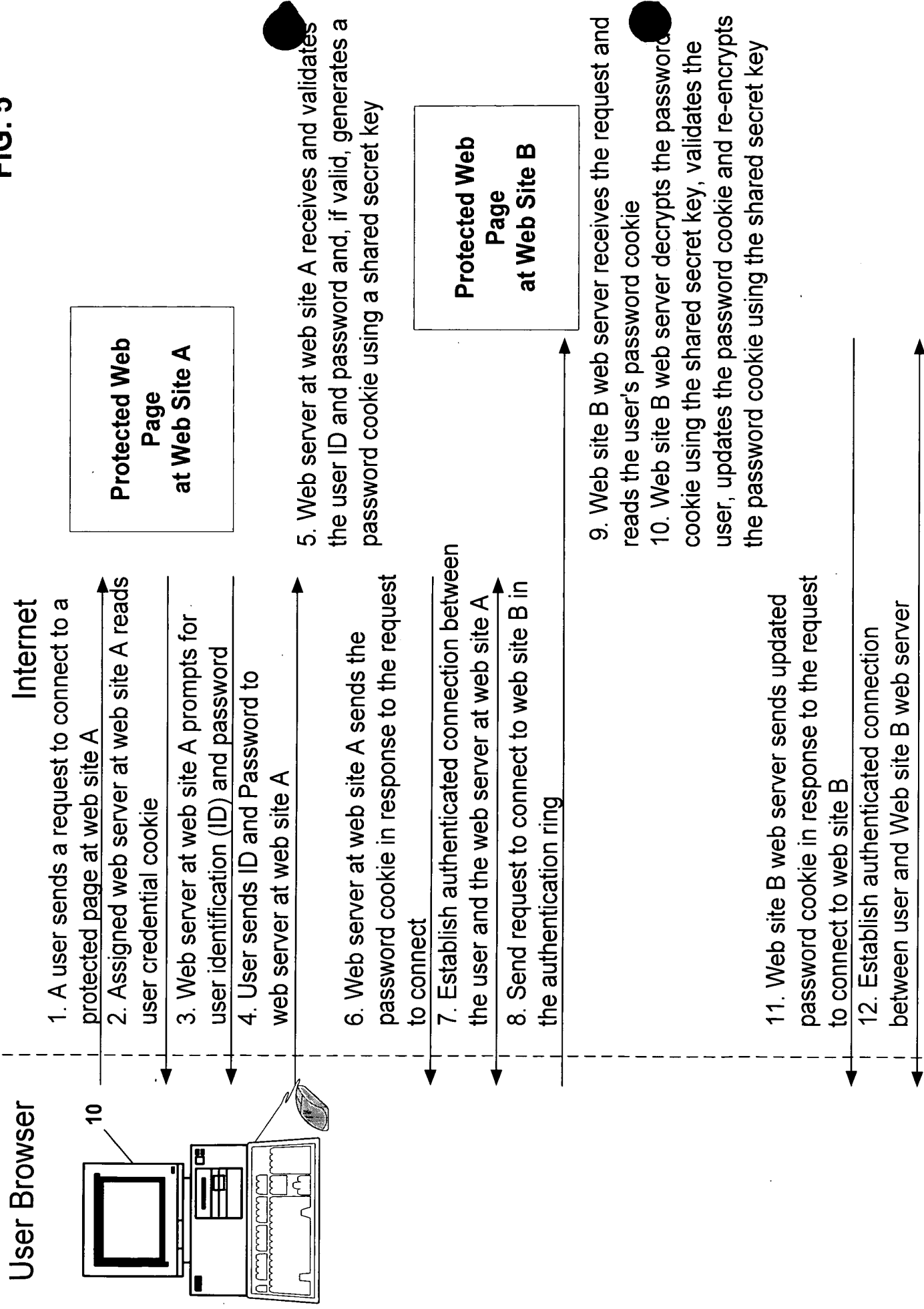


FIG. 5

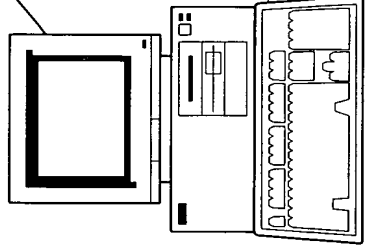


User Browser

Intranet

Extranet

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1. A user requests to connect to a protected page at SERP web site
2. Assigned SERP web server reads user credential cookie
3. SERP web server prompts for user ID and password
4. User sends ID and password to SERP web server
5. SERP web server receives and validates the user ID and password and, if valid, generates a password cookie using a shared secret key
6. SERP web server sends password cookie in response to the user connection request
7. Establish an authenticated connection between the user and the SERP web server
8. Send a request to connect to the SOP web server in the authentication ring

Extranet SOP Web Site

9. SOP web server receives the request and reads the user's password cookie
10. SOP web server decrypts the user's password cookie using the shared secret key, validates the user, updates the password cookie and re-encrypts the password cookie using the shared secret key
11. SOP web server sends the updated password cookie in response to the request to connect to the SOP web server

12. Establish an authenticated connection between the user and the SOP web server

FIG. 6